

WHAT IS CLAIMED IS:

1. An audio player comprising:  
a circular main body;  
a display panel provided at one face of said main  
5 body;

an operating switch rotatably provided at  
a periphery of said display panel; and

a wireless communication antenna provided at the  
other face of said main body.

10 2. The audio player according to claim 1, further  
comprising a card slot provided at a side face of said  
main body.

3. A headphone comprising:  
a circular main body;  
15 a speaker provided on one face of said main body;  
a wireless communication antenna provided at the  
other face of said main body; and

an ear hook provided at said main body.

4. The headphone according to claim 3, further  
20 comprising a rotary power switch rotatably provided at  
a periphery of said antenna.

5. A music reproduction apparatus comprising  
an audio player and a headphone connected to said audio  
player via a wireless digital data transmission  
25 channel, said audio player comprising:

a transmitter configured to transmit music data  
with an error correction code to said headphone;

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a reproduction request detector configured to detect a reproduction request from said headphone; and

5 a retransmission section configured to re-transmit requested music data to said headphone based on the reproduction request detected by said reproduction request detector, and said headphone comprising:

a receiver configured to receive music data transmitted from said audio player;

10 an error detecting/correcting section configured to detect and correct an error of the music data received by said receiver and determine whether or not data retransmission is required; and

15 a retransmission request section configured to, when said error detecting/correcting means determines that data retransmission is required, transmit a retransmission request to said audio player.

6. The music reproduction apparatus according to claim 5, wherein said headphone comprises an operating switch and wirelessly transmits an operating state  
20 signal of said operating switch to said audio player, and said audio player controls a player operation based on the operating state signal.

7. The music reproduction apparatus according to claim 5, wherein said headphone comprises a microphone  
25 and wirelessly transmits a voice signal input from the microphone and indicating a command to said audio player, and said audio player carries out voice

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signal transmitted from said headphone and controls a player operation based on a result of the command interpretation.

5           16. The music reproduction apparatus according to claim 13, wherein said audio player comprises an interface capable of wirelessly connecting a plurality of headphones.

10           17. The music reproduction apparatus according to claim 13, wherein said audio player comprises a first battery level detector configured to detect a level of an incorporated battery of the audio player, and said headphone comprises a second battery level detector configured to detect a level of an incorporated battery of the headphone and a first warning section configured to issue a warning sound when the level of the  
15           incorporated battery detected by at least one of said first battery level detector and said second battery level detector is lower than a predetermined value, and said audio player comprises a second warning section  
20           configured to display a warning message when the level of the incorporated battery detected by at least one of said first battery level detector and said second battery level detector is lower than the predetermined value.

25           18. The music reproduction apparatus according to claim 13, wherein said headphone comprises an electric field intensity detector configured to detect

an electric field intensity of an electric wave transmitted from said audio player and a warning section configured to issue warning when the detected electric field intensity is lower than a predetermined value.

19. The music reproduction apparatus according to claim 13, wherein said headphone comprises an error rate detector configured to detect an error rate of an electric wave transmitted from said audio player and a warning section configured to issue warning when the detected error rate is higher than a predetermined value.

20. The music reproduction apparatus according to claim 13, wherein said headphone comprises an electric field intensity detector configured to detect an electric field intensity of an electric wave transmitted from said audio player, a first distance estimator configured to estimate a first distance between said headphone and said audio player, an error rate detector configured to detect an error rate of the electric wave transmitted from said audio player, a second distance estimator configured to estimate a second distance between said headphone and said audio player, and a warning section configured to issue warning when at least one of the estimated first distance and the estimated second distance is longer than a predetermined distance.

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25. The music reproduction apparatus according to





an electric wave transmitted from said audio player and a warning section configured to issue warning when the detected error rate is higher than a predetermined value.

- 5           28. The music reproduction apparatus according to claim 21, wherein said headphone comprises an electric field intensity detector configured to detect an electric field intensity of an electric wave transmitted from said audio player, a first distance
- 10           estimator configured to estimate a first distance between said headphone and said audio player, an error rate detector configured to detect an error rate of the electric wave transmitted from said audio player, a second distance estimator configured to estimate
- 15           a second distance between said headphone and said audio player, and a warning section configured to issue warning when at least one of the estimated first distance and the estimated second distance is longer than a predetermined distance.

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